BRIDGES PERFORMING REMOTE READS AND WRITES AS UNCACHEABLE COHERENT

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ASTRACT OF THE DISCLOSURE

A system and method for improving the bandwidth for data read and write operations in a multi-node system by using uncacheable read and write commands to a home node in the multi-node system so that the home node can determine whether the commands needs to enter the coherent memory space. In one embodiment where nodes are connected via HT interfaces, posted commands are used to transmit uncacheable write commands over the HT fabric to a remote home node so that no response is required from the home node. When both cacheable and uncacheable memory operations are mixed in a multi-node system, a producer-consumer software model may be used to require that the data and flag must be co-located in the home node's memory and that the producer write both the data and flag using regular HT I/O commands. In one embodiment, a system for managing data in multiple data processing devices using common data paths comprises a first data processing system comprising a memory, wherein the memory comprises a cacheable coherent memory space; and a second data processing system communicatively coupled to the first data processing system with the second data processing system comprising at least one bridge, wherein the bridge is operable to perform an uncacheable remote access to the cacheable coherent memory space of the first data processing system. In some embodiments, the access performed by the bridge comprises a data write to the memory of the first data processing system for incorporation into the cacheable coherent memory space of the first data system. In other embodiments, the access performed by the bridge comprises a data read from the cacheable coherent memory space of the first data system.